

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 1
	APPL NO 540734	DATE 5/24/2013
	PROCESSED BY AK07	CHECKED BY

Compliance Assurance Monitoring (CAM) Plan Evaluation
(40 CFR Part 64)

APPLICANT'S NAME: SAN BERNARDINO COUNTY SOLID WASTE MANAGEMENT DIVISION – SAN TIMOTEO LANDFILL

MAILING ADDRESS: 222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415

EQUIPMENT ADDRESS: 31 REFUSE ROAD, REDLANDS, CA 92373

FACILITY ID #: 7068

CONTACT PERSON: ARTHUR L. RIVERA, DIVISION MANAGER,
PHONE: 939-386-8703, FAX: 939-386-8900

APPLICATION NO.: 540734

This compliance assurance monitoring (CAM) plan for non-methane hydrocarbons (NMHC) emissions generated by municipal solid wastes (MSW) landfill which are collected in a gas collection system (pollutant specific emission unit, PSEU) and controlled using a landfill gas (LFG) flares as air pollution control equipment.

INTRODUCTION/BACKGROUND:

This application was submitted by San Bernardino County Solid Waste Management Division – San Timoteo Landfill, on July 25, 2012 for Compliance Assurance Monitoring (CAM) Plan under 40 CFR Part 64 as part of the Title V renewal process. The initial Title V permit for this facility was issued December 14, 2007. The facility has applied for a Title V renewal (A/N 539396) which will incorporate this CAM plan into the Title V Facility Permit. This evaluation will demonstrate compliance with CAM requirements for control of Total Non-Methane Organic Compounds (TNMOC) emissions from LFG combustion in enclosed flares.

This compliance assurance monitoring plan is to comply with the requirements of 40 CFR 64, Compliance Assurance Monitoring (CAM). This regulation became effective November 21, 1997, however requirements of the plan were delayed while the Title V program was being implemented. Therefore, owners and operators were subject to CAM plan requirements during the Initial Title V renewal. This regulation affects emission units at the source subject to a federally enforceable emission limit or standard that uses a control device to comply, and either pre-control or post-control emissions exceed Title V thresholds.

Currently there is one permitted enclosed flare operating at this facility. The existing flare comply with 98% TNMOC destruction efficiency at 1400 degrees Fahrenheit. The following table provides a summary of the existing flares permit conditions and source test results demonstrating compliance with TNMOC destruction efficiency:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 2
	APPL NO 540734	DATE 5/24/2013
	PROCESSED BY AK07	CHECKED BY

Flare Application & Permit Number	Condition Limiting ROG Emission	ROG Limit (Lbs/hr)	Source Test Results
Flare A/N 360906 P/N F28029	No. 20	0.40	Source test results (05-31-2011): Stack Exhaust Temperature: 1516 deg F, TGNMOC lb/hr as Methane: 0.086 TNMOC destruction efficiency 98.3%
Flare A/N 360906 P/N F28029	No. 20	0.40	Source test results (06-01-2010): Stack Exhaust Temperature: 1444 deg F, TGNMOC lb/hr as Methane: 0.02 TNMOC destruction efficiency 99.61%

APPLICABILITY & REQUIREMENTS:

CAM rule (40 CFR Part 64) covers emission units that are evaluated on a pollutant by pollutant basis for equipment that meet the definition of pollutant specific emission units (PSUEs). The rule applies to each PSUE if the unit is located at a major source that is required to obtain a Part 70 or 71 (Title V) permit. The CAM plan requirements are;

- Describe the indicators to be monitored
- Describe ranges or the process to set indicator ranges
- Describe the performance criteria for the monitoring, including specifications for obtaining representative data, verification procedures to confirm monitoring operational status, QA/QC procedures and monitoring frequency.
- Provide a justification for the use of parameters, ranges, and monitoring approach.
- Provide emissions test data, if necessary
- Provide an implementation plan for installing, testing, and operating the monitoring.

EVALUATION:

For the flare, TNMOC emission limit is 20 ppmv@3% O₂, as hexane, or 98 wt% reduction of NMOC. This limit is based on 40 CFR 60, subpart WWW, 40 CFR 63, subpart AAAA and AQMD Rule 1150.1. In addition, the existing flares had to comply with BACT limit as listed below. The proposed flare is subject to LAER

SCAQMD BACT Criteria:

Rating/Size	Criteria Pollutants				
	VOC	NO _x	SO _x	CO	PM ₁₀
Digester Gas or Landfill Gas from Non-Hazardous Waste Landfill	Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1400 °F, Auto Combustion Air Control, Automatic Shutoff Gas Valve and Automatic Re-Start System (1988)	0.06 lbs/MM Btu (1988)		Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1400 °F, and Auto Combustion Air Control (1988)	Knockout Vessel (1988)
Landfill Gas from Hazardous Waste Landfill	Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1500 °F, Auto Combustion Air Control, Automatic Shutoff Gas Valve and Automatic Re-Start System (1988)	0.06 lbs/MM Btu (1988)		Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1500 °F, and Auto Combustion Air Control (1988)	Knockout Vessel (1988)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	5	3
	APPL NO 540734	DATE 5/24/2013
	PROCESSED BY AK07	CHECKED BY

- Temperature shall be measured at a location above the flame zone, at least 0.6 second downstream of the burner and not less than 5 feet from the top of the stack.
- Temperature monitor shall have an accuracy of +/- 1% of the temperature being measured.
- Installation, replacement and preventative maintenance for the temperature monitors shall be in accordance with manufacturer's specifications.
- There shall be multiple monitors installed on each flare. When a thermocouple malfunctions or is non-functional, it shall be replaced

Range:

- Minimum temperature of 1400 deg F for all the flares is required (as per the permit requirements). Temperature shall be recorded in degrees Fahrenheit. The data collected by an electronic data recorder shall record at least every 15 minutes.
- Excursion can be defined as anytime during operation when combustion temperature is lower than the minimum combustion temperature specified for the flare in the permit except during start up and shut down periods (not to exceed 30 minutes).
- Upon detecting any excursion from the acceptable range of readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable.

Frequency:

- Continuous temperature monitoring and recording. Valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.
- [Minimum 4 times per hr if post-control emissions are \geq MST; or
- Minimum 1 time per day if post-control emissions are $<$ MST].
- All exceedances shall be reported semi-annually that includes summary of information, at a minimum – number, duration and cause, and corrective actions taken.
- Same requirements apply for the monitor downtime incidences.

Monitoring Operation & Maintenance:

- The permittee shall be conditioned to comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7

Recordkeeping & Reporting:

- The permittee shall be conditioned to comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 4
	APPL NO 540734	DATE 5/24/2013
	PROCESSED BY AK07	CHECKED BY

Performance Test:

- Each flare shall be tested as per the permit requirements to show compliance with the NMOC hourly emission rate (offset limit), flare operating temperature, deg. F, TNMOC concentration (exhaust) in ppmv at 3% O₂, as hexane or demonstrate 98 wt% DRE. Information from recent source test results has been pasted in the table above.

Quality Improvement Plan:

- If the District or EPA determine that a Quality Improvement Plan (QIP) is required under 40 CFR Part 64.7 (d)(2), the permittee shall develop and implement the QIP in accordance with 40 CFR Part 64.8.

PERMIT CONDITION FOR FLARES:

The following condition will be imposed on the existing flares and the proposed flare:

THE EXHAUST TEMPERATURE SHALL BE MAINTAINED AT A MINIMUM OF 1,400 (FOR ALL FLARES) DEGREES FAHRENHEIT AVERAGED OVER 15-MINUTE PERIOD WHENEVER THE EQUIPMENT IS IN OPERATION, EXCLUDING START UP AND SHUTDOWN. STARTUP IS DEFINED AS THE PERIOD FROM FLARE IGNITION TO THE TIME WHEN 1,400 DEGREES F IS ACHIEVED, NOT TO EXCEED 30 MINUTES. SHUTDOWN IS THE PERIOD FROM WHEN THE GAS VALVE BEGINS TO BE SHUT AND COMPLETELY SHUTS OFF, NOT TO EXCEED 30 MINUTES.

EACH FLARE SHALL BE EQUIPPED WITH A CONTINUOUS EXHAUST TEMPERATURE MONITORING AND RECORDING SYSTEM PURSUANT TO THE OPERATION AND MAINTENANCE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.7 AND THE RECORDING SYSTEM SHALL BE IN OPERATION WHEN THE FLARE IS OPERATING. SUCH A SYSTEM SHALL HAVE AN ACCURACY OF WITHIN $\pm 1\%$ OF THE TEMPERATURE BEING MONITORED AND SHALL BE INSPECTED, MAINTAINED, AND CALIBRATED ON AN ANNUAL BASIS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS USING AN APPLICABLE AQMD OR EPA APPROVED METHOD.

FOR THE PURPOSE OF THIS CONDITION, A DEVIATION SHALL BE DEFINED AS WHEN A 15-MINUTE AVERAGE TEMPERATURE OF LESS THAN 1,400 DEGREES FAHRENHEIT OCCURS DURING OPERATION EXCLUDING START UP AND SHUTDOWN. THE EXHAUST TEMPERATURE SHALL BE RECORDED ATLEAST ONCE IN EVERY 15-MINUTE PERIOD. THE OPERATOR SHALL REVIEW THE RECORDS OF TEMPERATURE ON A DAILY BASIS TO DETERMINE IF A DEVIATION OCCURRED OR SHALL INSTALL AN ALARM SYSTEM TO ALERT THE OPERATOR WHEN A DEVIATION OCCURS.

FOR EACH SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K, WHENEVER AN DEVIATION OCCURS FROM 1,400 DEGREES FAHRENHEIT, THE OPERATOR SHALL TAKE IMMEDIATE CORRECTIVE ACTION, AND KEEP RECORDS OF THE DURATION AND CAUSE (INCLUDING UNKNOWN CAUSE, IF APPLICABLE) OF THE DEVIATION AND THE CORRECTIVE ACTION TAKEN.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	5	5
	APPL NO 540734	DATE 5/24/2013
	PROCESSED BY AK07	CHECKED BY

ALL DEVIATIONS SHALL BE REPORTED TO THE AQMD ON A SEMI-ANNUAL BASIS PURSUANT TO THE REQUIREMENTS SPECIFIED IN 40 CFR PART 64.9 AND CONDITION NOS. 22 AND 23 IN SECTION K OF THIS PERMIT.

THE OPERATOR SHALL SUBMIT AN APPLICATION WITH A QUALITY IMPROVEMENT PLAN (QIP) IN ACCORDANCE WITH 40 CFR PART 64.8 TO THE AQMD IF AN ACCUMULATION OF DEVIATION EXCEEDS 5 PERCENT DURATION OF THIS EQUIPMENT'S TOTAL OPERATING TIME FOR ANY SEMI-ANNUAL REPORTING PERIOD SPECIFIED IN CONDITION NO. 23 IN SECTION K OF THIS PERMIT. THE REQUIRED QIP SHALL BE SUBMITTED TO THE AQMD WITHIN 90 CALENDAR DAYS AFTER THE DUE DATE FOR THE SEMI-ANNUAL MONITORING REPORT.

THE OPERATOR SHALL KEEP ADEQUATE RECORDS IN A FORMAT THAT IS ACCEPTABLE TO THE AQMD TO DEMONSTRATE COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS SPECIFIED IN THIS CONDITION AND 40 CFR PART 64.9 FOR A MINIMUM OF FIVE YEARS.

[RULE 3004(A) (4)-PERIODIC MONITORING, 40CFR PART 64]

RULES:

Proposed CAM plan for TNMOC control using enclosed flare - flare station -is expected to comply with the Applicable requirements of the following regulations

- 40CFR Part 64
- 40 CFR Part 60, subpart WWW
- 40 CFR Part 63, subpart AAAA
- Rule 1150.1 and,
- Rule 1303 (b) (2)-Emission offsets.

RECOMMENDATION:

It is recommended that a CAM plan be issued for LFG control equipment for TNMOC control.